IN THE CLAIMS

Please amend the claims as follows.

1. (Previously Amended) A method for providing audio feedback regarding the operation of an aircraft, comprising:

receiving audio inputs from a plurality of microphones, wherein the plurality of microphones are disposed adjacent to at least one aircraft component, wherein the at least one aircraft component is a sound source;

mixing the audio inputs; and

providing an audio output to a speaker in response to the mixing step, wherein the audio output indicates operation of the at least one aircraft component.

2. (Original) The method of claim 1, further comprising:

providing settings to the mixing step, wherein the settings are based on the audio inputs and a psycho-acoustic model.

3. (Original) The method of claim 2, further comprising:

determining masked signals based on the frequency and amplitude of the audio inputs and the psycho-acoustic model;

determining an unmasking strategy based on the masked signals; and

providing the settings based on the unmasking strategy.

4. (Original) The method of claim 1, wherein the speaker is an ambient speaker.

5. (Original) The method of claim 1, wherein the speaker is contained in a headset.

6. (Original) The method of claim 2, wherein the settings comprise:

at least one of level, pan, and equalization settings.

7. (Original) The method of claim 1, wherein the mixing step is accomplished via an automatic mixer, and further comprising:

overriding the automatic mixer with a manual mixer, wherein the manual mixer comprises at least one of level, pan, and equalization control inputs.

8. (Currently Amended) The method of claim 1, wherein ~~the aircraft component is~~ microphones are placed on multiple elements selected from the group consisting~~at least one~~ of:

an airframe, an engine, a flap, a brake, a gear, a pump, and a cockpit.

9. (Original) The method of claim 1, further comprising:

detecting an aircraft operation; and

adding synthesized sounds to the audio inputs, wherein the synthesized sounds correspond to the detected aircraft operation.

10. (Original) The method of claim 9, wherein the aircraft operation comprises at least one of:

a hydraulic operation, an electrical system operation, an aircraft control operation, and a fuel transfer operation.

11. (Original) The method of claim 1, further comprising:

canceling noise from the audio inputs.

12. (Original) An aircraft, comprising:

an airframe;

at least one aircraft component coupled to the airframe; and

an audio feedback system, comprising:

a plurality of microphones disposed adjacent to the at least one aircraft component,

an analysis system that

receives audio inputs from the microphones, and

provides settings to an automatic mixer that mixes the audio inputs, wherein the recommended settings are based on the audio inputs and a psycho-acoustic model.

13. (Original) The aircraft of claim 12, wherein the analysis system further:

determines masked signals based on the frequency and amplitude of the audio inputs and the psycho-acoustic model;

determines an unmasking strategy based on the masked signals; and

provides the settings to the automatic mixer based on the unmasking strategy.

14. (Original) The aircraft of claim 12, wherein the automatic mixer:

mixes the audio inputs based on the settings; and

provides the mixed audio inputs to a speaker.

15. (Original) The aircraft of claim 14, wherein the speaker is an ambient speaker.

16. (Original) The aircraft of claim 14, wherein the speaker is contained in a headset.

17. (Original) The aircraft of claim 12, wherein the settings comprise:

at least one of level, pan, and equalization settings.

18. (Original) The aircraft of claim 12, wherein the audio feedback system further comprises:

a manual mixer comprising level, pan, and equalization control inputs, wherein the manual mixer overrides the automatic mixer.

19. (Original) The aircraft of claim 12, wherein the aircraft component is one of:

the airframe, an engine, a flap, a brake, a gear, a pump, and a cockpit.

20. (Original) The aircraft of claim 12, wherein the aircraft component is coupled directly to the airframe.

21. (Original) The aircraft of claim 12, wherein the aircraft component is coupled indirectly to the airframe.

22. (Original) The aircraft of claim 12, wherein the analysis system further:

detects an aircraft operation; and

adds synthesized sounds to the audio inputs, wherein the synthesized sounds correspond to the detected aircraft operation.

23. (Original) The aircraft of claim 22 wherein the aircraft operation comprises at least one of:

a hydraulic operation, an electrical system operation, an aircraft control operation, and a fuel transfer operation.

24. (Original) An audio feedback system, comprising:

at least one microphone for receiving sounds from at least one sound source; and

an analysis system that

receives audio inputs from the microphone, and

provides settings to an automatic mixer that mixes the audio inputs, wherein the recommended settings are based on the audio inputs and a psycho-acoustic model.

25. (Original) The audio feedback system of claim 24, wherein the analysis system further:

determines masked signals based on the frequency and amplitude of the audio inputs and the psycho-acoustic model;

determines an unmasking strategy based on the masked signals; and

provides the settings to the automatic mixer based on the unmasking strategy.

26. (Original) The audio feedback system of claim 25, wherein the automatic mixer:

mixes the audio inputs based on the settings; and

provides the mixed audio inputs to a speaker.

27. (Original) The audio feedback system of claim 26, wherein the speaker is an ambient speaker.

28. (Original) The audio feedback system of claim 26, wherein the speaker is contained in a headset.

29. (Original) The audio feedback system of claim 24, wherein the settings comprise:

at least one of level, pan, and equalization settings.

30. (Original) The audio feedback system of claim 25 further comprising:

a manual mixer comprising level, pan, and equalization control inputs, wherein the manual mixer overrides the automatic mixer.

31. (Original) The audio feedback system of claim 25, wherein the sound source is at least one aircraft component.

32. (Original) The audio feedback system of claim 31, wherein the aircraft component is at least one of:

an airframe, an engine, a flap, a brake, a gear, a pump, and a cockpit.

33. (Original) The audio feedback system of claim 24, wherein the analysis system further:

detects aircraft operations; and

adds synthesized sounds to the audio inputs, wherein the synthesized sounds correspond to the detected aircraft operations.

34. (Original) The audio feedback system of claim 33 wherein the aircraft operations comprise at least one of:

hydraulic operations, electrical system operations, aircraft control operations, and fuel transfer operations.

35. (New) A method for providing audio feedback regarding the operation of an aircraft, comprising:

receiving audio inputs from a plurality of microphones, wherein the plurality of microphones are disposed adjacent multiple aircraft components, wherein the aircraft components are sound sources;

mixing the audio inputs; and

providing an audio output to a speaker in response to the mixing step, wherein the audio output facilitates simultaneous monitoring of the operation of the multiple aircraft components.

36. (New) The method of claim 35 wherein mixing the audio inputs comprises dampening portions of selected component sounds that interfere with other component sounds.

37. (New) The method of claim 36 wherein the selected component sounds are sounds from components having a wide frequency range.

38. (New) The method of claim 35 and further comprising:

sensing operation of components that are normally silent;

synthesizing sounds corresponding to the sensed operation of the components that are normally silent.